

### **REMARKS/ARGUMENTS**

This paper is submitted in response to the office action mailed July 15, 2003. In the office action, the Examiner maintained a rejection of claims 61-66 under 35 U.S.C. 102(e) based on Bearnson *et al.* The Examiner next rejected claims 1-4, 7-60 and 67 under 35 U.S.C. §103(a) as being unpatentable over Barada *et al.*, (JP2001-074049, equivalent to U.S. Patent No. 6,404,088, hereinafter “Barada”) in view of Ueyama (U.S. Patent No. 6,215,218, hereinafter “Ueyama”).

Applicants thank the Examiner for the telephonic interview of October 14, 2003. The 35 U.S.C. 102(e) rejection was first briefly discussed. It was discovered that the signed 37 C.F.R. §1.132 Declaration submitted by the applicants on May 12, 2003 in response to this rejection was received by the Office of Initial Patent Examination but not entered into the file history of this Application. The 35 U.S.C. §103(a) rejection was also discussed during the interview, with applicants’ representatives presenting arguments that the combination of Barada and Ueyama does not provide every element of the claims of the instant application as amended in the paper of April 24, 2003. As a result, the combination of Barada and Ueyama cannot support a §103(a) rejection. The Examiner promised reconsideration of the Ueyama reference in light of the arguments made.

#### **Section 102 Rejections**

The applicants are submitting a copy of the signed declaration and the returned, date-stamped postcard certifying its receipt on May 14, 2003. The applicants respectfully submit that this filing places claims 61-66 in condition for allowance.

#### **Section 103 Rejections**

The examiner next rejected claims 1-4, 7-60, and 67 under 35 U.S.C. §103(a) as being unpatentable over Barada in view of Ueyama. In making a §103(a) rejection, an Examiner carries the burden of establishing a *prima facie* case of obviousness. *See, e.g., In re Glaug*, 283 F.3d 1335 (Fed. Cir. 2002); *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); MPEP

§2142. In order to establish a *prima facie* case, “all the claim limitations must be taught or suggested by the prior art.” MPEP §2143.03. As discussed during the interview of October 14, 2003, because the combination of Barada and Ueyama does not teach the storage of a plurality of displacement outputs over a period of time or estimating a sensor offset using stored displacement outputs, the rejection should be withdrawn, and the claims allowed.

In the office action, the Examiner first discussed the Barada reference, asserting that it teaches the elements of the claims of the instant application with the exception that “Barada does not disclose a means for storing a plurality of displacement outputs and keeping the outputs in memory.” Office Action, p. 3. The Examiner combined Ueyama with Barada to provide this missing element, asserting that in the apparatus of Ueyama, “[t]he DSP board stores displacement and other information for further use.” Office Action, p. 4. To support this position, the Examiner cites column 7 of Barada, beginning at line 33 and continuing to column 8 line 3. Applicants note that no teaching of using stored displacement outputs in estimating a sensor offset is available in Barada. This alone renders the §103(a) rejection unsupportable.

In addition to the above, however, Barada does not teach storage of a plurality of displacement outputs for future use. As discussed in its abstract, Barada provides a control magnetic bearing having a controller and a mechanical main unit. As illustrated in Figure 3, the controller 2 includes in part a DSP board 16. The DSP board 16 is described in column 6, lines 32-36 as including a DSP 18 (a Digital Signal Processor), ROM 31, and flash memory 19. The DSP is a processor which accesses the contents of the ROM 31 and flash memory 19. The contents of the ROM 31 and flash memory 19 are described in column 7, lines 33-39, cited by the Examiner.

The ROM 31 of the controller 2 is described as storing “processing programs used by the DSP 18.” *Id.* By its very nature, the ROM, or “Read Only Memory,” may be written to only a single time, such as during manufacture of the device, following which it cannot be modified. As a result of this, and consistent with the specification, the ROM is not taught to store displacement signals measured by components of the device, as required in the claims of the instant Application.

The flash memory 19 is described as containing three tables: (1) a control parameter table storing control parameters used by the magnetic bearing sets 6, 7, and 8; (2) an identification signal table storing data (target position data) regarding identification signals; and (3) a bias current table storing values of basis currents. Each of these tables is discussed in the text of the specification.

First, the control parameter table “stores tentative control parameters for identification purposes and plural sets of operation control parameters corresponding respectively to plural types of the mechanical main units 1.” Barada, column 7, lines 40-43. These data are described as being “read” from the flash memory when the controller is turned on. Barada, *see, e.g.*, column 10, lines 27-30; column 11, lines 16-20; and column 12, lines 47-50. No teaching is provided of the device writing sensor data of any type to the control parameter table.

The identification signal table is described as including target position data. Barada, *see, e.g.*, column 7, lines 44-48; column 11, lines 46-53; and column 12, lines 65-column 13, line 2. Each of these textual descriptions speaks of the identification means 32 of the controller “reading” from the table. No teaching is provided of the device writing sensor data of any type to the memory. Indeed, the specification teaches only that the contents of this table may be “rewritten using the personal computer 3” illustrated on Figure 3. *See, e.g.*, Barada column 7, lines 45-47 and column 11, lines 66-67.

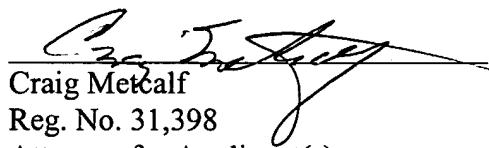
The bias current table of the flash memory 19 is described as including bias current values. *See, e.g.*, Barada, column 16, lines 38-43. As with the previous two tables, the specification of Barada teaches accessing data stored in the flash memory 19. No teaching is provided of the device writing sensor data of any type to this table of the memory.

As amended in the Amendment filed April 24, 2003, independent claims 1, 19, 33, 50, and 67 recite either steps of storing a plurality of displacement outputs over a period of time and adjusting the displacement output to account for a sensor offset estimated using stored displacement outputs or systems to accomplish the above steps. Because the combination of Barada and Ueyama fails to teach either of these components of the claims of the instant application, the rejection under 35 U.S.C. §103(a) should be withdrawn, and claims 1-4, 7-60, and 67 promptly allowed.

Appl. No. 09/895,881  
Amdt. dated October 15, 2003  
Reply to Office Action of July 15, 2003

In view of the foregoing, applicants respectfully submit that the application is in condition for immediate allowance. In the event that any questions remain, the Examiner is respectfully invited to initiate a telephone conference with the undersigned.

Respectfully submitted,



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Date: October 15, 2003

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**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on April \_\_\_\_\_, 2003.

Attorney for Applicant

**PATENT**Docket No. 2673.2.1**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Brad E. Paden et al. )  
 Serial No.: 09/895,881 )  
 Filed: June 29, 2001 ) Group Art  
 For: METHOD AND SYSTEM FOR POSITIONING A ) Unit: 2837  
 MOVABLE BODY IN A MAGNETIC BEARING )  
 SYSTEM )  
 Examiner: Tyrone W. Smith )

**DECLARATION UNDER 37 C.F.R. §1.132**

Assistant Commissioner  
 For Patents  
 Washington, D.C. 20231

Dear Sir:

We, Brad E. Paden, Gill B. Bearson, and Jed C. Ludlow, declare as follows:

1. We are co-inventors of the invention which is the subject of the above-identified patent application and are familiar with its contents and subject matter.
2. The patent entitled "Pump Having a Magnetically Suspended Rotor with One Active Control Axis," U.S. Patent Number 6,394,769 (referred to hereinafter as the 'Bearson patent') has been cited in an Office Action mailed January 24, 2003 by the U.S. Patent and Trademark Office.
3. We are co-inventors of the Bearson patent, and are thus familiar with its contents and subject matter.

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4. Any invention disclosed but not claimed in the Bearnson patent was derived from the co-inventors of this application and is thus not an invention "by another."

We declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful, false statements may jeopardize the validity of the application or any patent issuing thereon.

Dated this 12 <sup>May</sup> day of April, 2003.

Brad Paden  
Brad E. Paden

Dated this 30 day of April, 2003.

Gill Bearnson  
Gill B. Bearnson

Dated this 3 <sup>May</sup> day of April, 2003.

Jed C. Ludlow  
Jed C. Ludlow



TO THE UNITED STATES PATENT AND TRADEMARK OFFICE:  
PLEASE DATE STAMP AND RETURN. THANK YOU.

SUBMITTED: Transmittal of Declaration Under 37 CFR §1.132; Declaration; and Certificate of Mailing.

Inventors: Brad E. Paden et al.  
Title: METHOD AND SYSTEM FOR POSITIONING A  
MOVABLE BODY IN A MAGNETIC BEARING SYSTEM  
Serial No.: 09/895,881  
Filing Date: June 29, 2001  
Mailed: May 12, 2003  
Docket: 2673.2.1



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